Asymmetry in task dependence among team members

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CHAPTER 3

THE INFLUENCE OF TASK INTERDEPENDENCE ON THE RELATIONSHIPS BETWEEN POWER DISADVANTAGE AND AFFECTIVE REACTIONS[7]

Creating positive affective reactions within a team, such as high affective team commitment and job satisfaction, is of great importance for the health and well-being of team members (e.g., Sonnentag, 1996) as well as the productivity of the team as a whole (e.g., Ostroff, 1992). Additionally, the value of having employees with positive affective reactions is important for organizations in light of the increasing problem of retaining qualified employees due to the shortages on several segments of the labor market (cf. Cappelli, 2005). This importance arises from the fact that the turnover (intentions) of these employees strongly depends on their affective reactions towards their team and their job (e.g., Hellman, 1997; Van Knippenberg & Sleebos, 2006). Consequently, it is of great worth to both researchers and practitioners alike to gain insight into the antecedents of positive affective reactions.

Previous research has already identified several antecedents, such as individual differences in affectivity (e.g., Connolly & Viswesvaran, 2000), role ambiguity and role conflict (e.g., Jackson & Schuler, 1985), and experienced meaningfulness and felt responsibility for outcomes of the work (e.g., Fried & Ferris, 1987). Recently, Rasmussen and Jeppesen (2006: p. 123) observed that the majority of studies regarding interdependence and satisfaction reported a positive relationship, which indicates that the interdependence among team members might also be an important antecedent of affective reactions.

[7] This Chapter is based upon De Jong, Van der Vegt, Molleman (Submitted).

Consequently, it can be argued that the more team members have to exchange materials, information, and resources with other team members, the more satisfied they generally are with their jobs and their team (e.g., Sprigg, Jackson, & Parker, 2000; Van der Vegt et al., 2000; Van der Vegt et al., 2001; Wageman, 2001).

However, most prior studies have only examined the effects of the *level* of task interdependence and ignored the possibility that inequalities or *asymmetries* in task dependence can exist between team members (e.g., Kelley & Thibaut, 1978). Although empirical evidence is still scarce, recent studies focusing at the relational level (De Jong, Van der Vegt, & Molleman, 2007; Rusbult & Van Lange, 2003) indicate that such asymmetries in task dependence are associated with power imbalance in work relations. In this study we will extend these findings by examining the relationship between asymmetry in task dependence and team members' affective reactions. Based on empirical studies and theories regarding power and dependence (e.g., Emerson, 1962) we will argue that team members who are more task dependent upon colleagues then vice versa (e.g., whom are power disadvantaged) will report more negative affective reactions unless they are able to convince their more powerful colleagues to pay attention to their needs. By drawing from research regarding social exchange and interdependence (e.g., Anderson & Williams, 1996; Borstein, 1989) we will argue that higher levels of task interdependence enable the power disadvantaged to convince their powerful team members to share their resources (cf. Casciaro & Piskorski, 2005).

Hence, by explicitly separating the effects of asymmetry in task dependence from the effects of the level of task interdependence, we are able to investigate the unexplored relationship between power disadvantage, task interdependence and affective reactions. By doing so we not only aim at increasing the insights into the antecedents of affective reactions (e.g., Rasmussen & Jeppesen, 2006), but also aim at increasing the knowledge about the scarcely researched effects of asymmetry in task dependence (cf. De Jong et al., 2007; Casciaro & Piskorski, 2005). The hypothesis will be tested with multi-level analyses of a dataset containing 262 employees.

THEORY AND HYPOTHESES

Definitions and research model

Since one of the main contributions of the present study is to disentangle the effects of the level of task interdependence and asymmetries in task dependence, we will discuss these two constructs first. The concept of task interdependence has received an ample amount of attention from researchers

(for reviews see, e.g., Johnson & Johnson, 1989; Van der Vegt et al., 2005; Van der Vegt & Van de Vliert, 2002; Wageman , 2001) and has often been defined as the degree to which the design of an individual team member's tasks and job requires that he or she coordinates activities and exchanges materials and information with other members of the team for being able to carry out the job (Brass, 1981; Kiggundu, 1983; Van der Vegt et al., 2000, 2001; Van der Vegt & Van de Vliert, 2005). Most of these studies reported a positive relationship between the level of task interdependence and positive affective reactions (e.g., Rasmussen & Jeppesen, 2006). Task interdependence might increase job satisfaction, because higher levels of task interdependence are often associated with more varied and challenging work (e.g., Van der Vegt et al., 2001: p. 54).

In sharp contrast to the efforts spend on investigating the level task interdependence stands the amount of attention paid to asymmetry in task dependence. Asymmetry in task dependence has been defined at the relational level as the degree to which a team member (A) needs more/less information, resources, advice, knowledge, physical assistance, and/or equipment from another team member (B) in order to complete his or her task successfully than vice versa (e.g., Cummings, 1978; De Jong et al., 2007; Van der Vegt et al., 2002). As will be explained below, such asymmetries in task dependence could exert an influence on the individual level due to their association with differences in power between individuals (e.g., De Jong et al., 2007; Rusbult & Van Lange, 2003). More specifically, individuals who are more task dependent on their colleagues than vice versa need more resources than they themselves can offer in return and are therefore in a position of power disadvantage (cf. Emerson, 1962). Since individuals will only use the power they perceive to have, we developed our model by explicitly taking these self-perceptions into consideration (cf. De Jong et al., 2007; Ferrin et al., 2006). For the above reasons, we focus on perceived power disadvantage as the basis of our model (see Figure 3.1) and, inline with the classical formulation of power (Emerson, 1962), we define perceived power disadvantage as the awareness of a team member of being more task dependent upon his or her colleagues than vice versa.

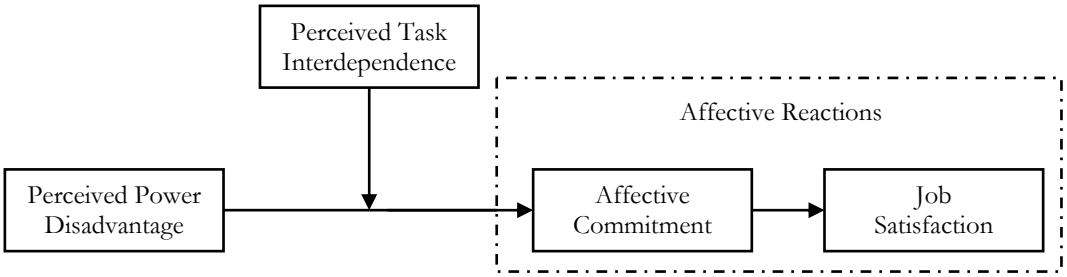

Figure 3.1: Research Model

As the above discussion indicates our model builds on the recently emerged evidence that power differences due to asymmetries in task dependence can significantly influence social exchange processes at the relational level (De Jong et al., 2007). An individual's affective commitment to the team captures the result of such social exchange processes, because affective commitment is derived from an individual's perceptions of how the other party is living up to their part of the social exchange processes (cf. Van Knippenberg & Sleebos, 2006). Consequently, due to this association with social exchange processes, we will argue that affective commitment mediates the relationship between perceived power disadvantage and job satisfaction. Furthermore, we expect that the relationship between perceived power disadvantage and affective reactions is influenced by perceived task interdependence (cf. Casciaro & Piskorski, 2005). Before explaining this moderating effect of perceived task interdependence we will first discuss the core of our model, namely the relationship between asymmetry in task dependence and perceived power disadvantage.

Perceived power disadvantage and affective commitment

The association between differences in dependence and differences in power was already made by Richard Emerson in 1962, who mentioned (p. 33) that: "the power of A over B is equal to, and based upon, the dependence of B upon A". Emerson not only related differences in dependence with power imbalance, he also distinguished this concept from the level of dependence. However, as Casciaro and Psikorski (2005, pp. 168-169) recently observed, these two different aspects of dependence were combined in one concept of interdependence in the original formulation of resources dependence theory. Unfortunately, this integration of the level of and the differences in dependence into one construct happened not only in inter-organizational studies, but also in studies investigating task interdependence in work teams. As a result affective reactions have only been investigated in relation to the level of task interdependence (e.g., Sprigg et al., 2000; Van der Vegt & Van de

Vliert, 2000; Van der Vegt et al.., 2001; Wageman, 2001) and not in relation with differences in dependence and power.

This oversight is problematic because team members who perceive themselves to be power disadvantaged can be expected to report less positive affective commitment if the powerful team members are abusing them. The essence of being more powerful is the ability to potentially use this power, and research has shown that the powerful are indeed in a position to withhold support or to leave the relationship since they incur less costs from such actions than less powerful team members (e.g., Cook & Emerson, 1978; Giebels et al., 2000). It is reasonable to expect that being powerless in a team where the powerful are actively abusing their power is highly unpleasant and a clear indication that the powerful have no intention of fulfilling their part of the social exchange processes. For these reasons we argue that perceived power disadvantage is associated with less affective commitment to the team and less satisfaction with one's job.

In addition, research into the effects of power on cognitive processes and information processing has indicated that being powerful diminishes an individual's need to devote cognitive effort in observing and interpreting the behavior of the power disadvantaged (e.g., Depret & Fiske, 1999; Fiske, 1993; Fiske et al., 2004). Thus, the power disadvantaged team members might not only be receiving less help then needed due to power abuse of the powerful, but also due to the fact that the powerful are simply not aware of their needs. Consequently, being power disadvantaged opens up the possibility of being abused and/or simply being overlooked. Regardless of the precise reason (or mix of reasons) for the lower helping behavior of the powerful, the power disadvantaged person's affective commitment to the team can be expected to be less when he or she does not receive adequate resources.

However, the above also implies a positive relationship between power disadvantage and affective commitment when the powerful recognize the need for help and choose to provide resources to the power disadvantaged. These circumstances are very beneficial to the power disadvantaged, because they now receive the required resources despite the risks of being overlooked or abused due to the asymmetry in their task dependence. Newcomers to a team or junior team members, for example, are aware that they are dependent on the other team members to learn how to perform their job adequately and this dependence increases their sensitivity to the helpful behaviors of the more powerful team members (e.f. Fiske, 1993; Holmes & Rempel, 1989). Therefore, they can be expected to have high affective commitment to the team and satisfaction with the job when the other team members readily provide these resources. Consequently, we expect that if the power disadvantaged are provided with an adequate amount of

resources, the relationship between perceived power disadvantages and affective commitment becomes positive instead of negative. The question which then remains is how might the power disadvantaged be able to persuade the powerful? We will argue that an answer to this question lies in the level of task interdependence.

The moderating effect of perceived task interdependence

High levels of task interdependence provide the power disadvantaged bargaining power (cf. Casciaro & Piskorski, 2005). Under conditions of task interdependence both parties have fewer alternatives, since they are both dependent upon the other. Although a power disadvantaged team member still needs more resources from the powerful then vice versa, the powerful also depends on the power disadvantaged for important resources. In other words, the alternatives for the powerful team members are lower with high task interdependence as compared to low task interdependence and as a result the cost of actively abusing ones power goes up, making it subsequently less likely that the powerful will take such actions. Hence, the power disadvantaged are in a much better position to persuade the powerful to share their resources under high levels of task interdependence compared to low levels of task interdependence.

High task interdependence not only increases the cost of the powerful, but also provides power disadvantaged persons with more opportunities to communicate their needs due to the higher frequency of exchange associated with high task interdependence (e.g., Anderson & Williams, 1996). An increase in interaction frequency can increase the 'liking' between the team members due to the 'exposure effect' (Bornstein, 1989) and enable the power disadvantaged to keep the powerful informed about, and motivated to fulfill, their needs.

The less optimistic side of the above processes is that power disadvantaged team members who are in low task interdependence relationships not only have less to offer to the powerful team members, but also have fewer opportunities to inform and motivate the powerful. As a result, both the active use of power and the decline in information processing would be higher under low levels of task interdependence. Consequently, we expect that perceived power disadvantage is negatively related to affective commitment and job satisfaction when perceived task interdependence is low and positively when perceived task interdependence is high. Stated more formally:

Hypothesis 1a: Perceived power disadvantage is negatively associated with affective commitment when perceived task interdependence is low.

Hypothesis 1b: Perceived power disadvantage is positively associated with affective commitment when perceived task interdependence is high.

Hypothesis 2a: Perceived power disadvantage is negatively associated with job satisfaction when perceived task interdependence is low.

Hypothesis 2b: Perceived power disadvantage is positively associated with job satisfaction when perceived task interdependence is high.

Hypothesis 3: Affective commitment is a mediator between perceived power disadvantage, perceived task interdependence, and job satisfaction.

METHOD

Sample and procedure

In order to test our hypotheses, we contacted 67 teams in the Netherlands consisting of 337 individuals in total, of which 262 individuals (78%) returned useful questionnaires. In order to increase the external validity of our study we approached teams with very diverse backgrounds, and teams in our sample came from, for example, the health care, banking, industrial, and retail sector. Specific jobs within our sample were, for instance, financial advisor, nurse, technical consultant, administrator, real estate agent, mortgage expert, business consultant, marketer, insurance expert, educational professional, account manager, system engineer, call center employee, software developer, auditor, analyst, and controller. On average the teams consisted of 5.04 team members (SD=3.47). Our questionnaire contained questions related to the demographic background of the respondents and social network items assessing the extent of perceived power disadvantage and perceived task dependence between the specific respondent and each of their fellow team members. Additionally, the questionnaire contained the affective commitment and job satisfaction items. A short introductory text explicitly guaranteed confidentiality. Since we had to get permission from the supervisors to investigate their teams, we decided to only focus on the horizontal working relationships between team members given the possibility that the supervisors' knowledge of the purpose of our study could have introduced

biases in their responses (e.g., demand characteristics). In our sample 164 of the 262 respondents were female (63%), the average age was 36.32 years (SD=10.56), and average team tenure was 2.94 years (SD= 3.76).

Measures

Perceived power disadvantage. We measured perceived power disadvantage at the dyadic level by using the following two items reported in De Jong et al. (2007): "How dependent *are you on X* for materials, means, information, etc. in order to carry out your work adequately?" and "How dependent *is X on you* for materials, means, information, etc. in order to carry out his or her work adequately?" (1 ="*not dependent*", 7="*completely dependent*"). In all items, X was replaced by the name of a specific fellow team member and we inquired about all relationships. Consistent with a conceptualization of power disadvantage as resource dependence (Emerson, 1962), we calculated each individual's power disadvantage within a dyad by calculating the differences between the two questions, such that a positive score resulted in greater perceptions of power disadvantage (cf. Casciaro & Psikorski, 2005). Subsequently, we aggregated these dyadic power scores to the individual level by taking the mean. The resulting measure reflects the perception of each individual about his or her average power disadvantage within the team.

Perceived task interdependence. Consistent with prior research (Casciaro & Piskorski, 2005) we calculated perceived task interdependence by taking the average of the above-mentioned two questions for each dyad, such that a positive score resulted in greater perceptions of task interdependence. Subsequently, we averaged these dyadic scores to the individual level by taking the mean. The resulting measure reflects the perception of each individual about his or her average task interdependence within the team.

Affective commitment. This variable was measured using three items adapted from past research (Allen & Meyer, 1990): "I feel a strong sense of belonging to my team"; "I really feel as if this team's problems are my own"; "I feel like 'part of the family' in this team". These items were rated on a seven-point scale (1= "*totally disagree*", 7="*totally agree*"). Cronbach's alpha was .89.

Job satisfaction. We measured this variable with four items from Agho, Price, and Mueller's (1992) satisfaction scale: "I find real enjoyment in my job"; "I am seldom bored with my job"; "I am very satisfied with my job"; "I would not consider taking another kind of job". These items were rated on a seven-point scale (1= "*totally disagree*", 7="*totally agree*"). Cronbach's alpha was .91.

Discriminant and convergent validity

We used confirmatory factor analysis to assess the discriminant and convergent validity of the affective commitment and job satisfaction scales. We computed parameter estimates with the LISREL 8.51 computer package, using the maximum likelihood method. We first tested a model in which the three affective commitment items and the four job satisfaction items loaded on two corresponding latent constructs. The overall fit of the model to the data was adequate (χ^2 [13, 262] = 41.99, p< .001, the standardized root mean square of the residuals (SRMSR) was .05, the goodness-of-fit index (GFI) was .96, and the comparative fit index (CFI) was .97). The factor loading of each item was significant at the .001 level or better. In order to further evaluate the discriminant validity of our scales we computed an alternative model, in which all seven items loaded on one latent construct. The fit of this model was significantly worse than that of the hypothesized measurement model ($\Delta\chi^2$ [1] = 381.41, p< .001, SRMSR= .17, GFI= .68, CFI= .68). Hence, we concluded that the hypothesized two-factor measurement model was the most appropriate for the situation under consideration.

Analyses

To acknowledge the nested structure of the data, with individuals nested within work teams, we conducted multilevel analyses (e.g., Snijders & Bosker, 1999), starting with a model without any predictor variables to assess a baseline condition. As can be seen in Table 3.2 and 3.3, we then calculated a model containing only team size as a control variable, after which we added the main effects to the subsequent model. The two-way interaction was added in the third model. For the job satisfaction analyses we added the moderating mediation terms to the fourth model (e.g., Muller, Judd, & Yzerbyt, 2005). We tested the decrease in log-likelihood between each of the models by means of a chi-square difference test. All the independent variables were standardized prior to the analysis to minimize the likelihood of multicollinearity problems and to facilitate comparison between the obtained coefficients. The interaction term was calculated from the product of the standardized variables (see Aiken & West, 1991).

RESULTS

Descriptive statistics

The means, the standard deviations, and the Pearson zero-order correlations between the variables are presented in Table 3.1. As can be seen, the zero-order correlation between affective commitment and job satisfaction was positive and significant (r=.42, p<.001). The correlation between affective commitment and perceived task interdependence was positive and significant

(r=.15, p<.05), and the correlation between job satisfaction and perceived task interdependence was positive and approached significance (r=.11, p<.10). The relationship between team size and perceived task interdependence was negative and significant (r=-.35, p<.001), indicating that individuals in larger teams perceive lower levels of task interdependence. To account for the possible confounding effects of team size we controlled for this variable in all our analyses.

Table 3.1: *Descriptive Statistics and Pearson Zero-Order Correlations (n=262)*

Variable	M	SD	1	2	3	4
1 Affective commitment	5.17	1.34				
2 Job satisfaction	5.47	1.16	.42 ***			
3 Team size	5.04	3.47	-.08	.04		
4 Perceived Power Disadvantage	.10	1.04	-.02	.02	.01	
5 Perceived Task Interdependence	3.77	1.33	.15 *	.11 ~	-.35 ***	-.09

~ p< .10
* p< .05
*** p< .001

Note; The M and SD of team size are measured at the team level, all the other statistics are at the individual level.

Hypothesis tests

Hypothesis 1 and 2 predicted a moderation effect of perceived task interdependence on the relationship between perceived power disadvantage and affective commitment. As can be seen in Table 3.2, the second model (including the main effects of perceived power disadvantage and perceived task interdependence) had significantly more predictive power than first model which only contained the control variable ($\Delta\chi^2$=5.69, df=2, p<.05). This effect can be attributed to the positive and significant coefficient for perceived task interdependence (b=.19, p<.05). In model 3 we added the interaction between perceived power disadvantage and perceived task interdependence which significantly improved the model ($\Delta\chi^2$=5.19, df=1, p<.05). The interaction coefficient had the expected positive sign (b=.26, p<.05).

Table 3.2: *Results of Multilevel Analysis for Affective Commitment*

		Model 1		Model 2		Model 3	
Model	**Variable**	**B**	**SE**	**B**	**SE**	**B**	**SE**
1 Control variable	Team size	-.10	.13	-.02	.14	-.01	.14
2 Main effects	Perceived Power Disadvantage (PPD)			-.04	.07	.03	.08
	Perceived Task Interdependence (PTI)			.19*	.09	.19*	.09
3 Interaction	PPD * PTI					.26*	.11
	$\Delta\chi^2$		.57		5.69*		5.19*
n=262	* p< .05						

Figure 3.2 represents the significant two-way interaction between perceived power disadvantage and perceived task interdependence for affective commitment. In creating the figure we followed the procedures suggested by Aiken and West (1991). As was expected, perceived power disadvantage was negatively related to affective commitment at low levels of perceived task interdependence (simple slope: b=-.226, se=.110, p<.05) and positive related at high levels of perceived task interdependence (simple slope: b=.284, se=.162, p<.05). These results support Hypotheses 1a and 1b.

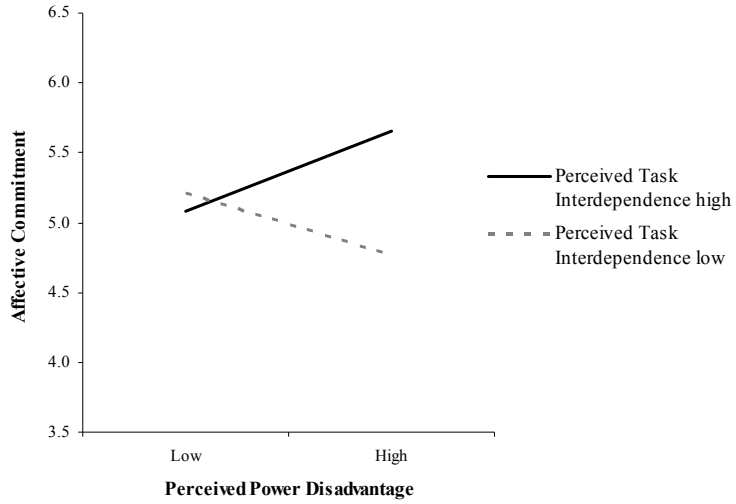

Figure 3.2: Perceived Power Disadvantage and Affective Commitment at Different Amounts of Perceived Task Interdependence

Table 3.3: *Results of Multilevel Analysis for Job Satisfaction*

		Model 1		Model 2		Model 3		Model 4	
Model	**Variable**	**B**	**SE**	**B**	**SE**	**B**	**SE**	**B**	**SE**
1 Control variable	Team size	.04	.11	.10	.11	.11	.11	.11	.09
2 Main effects	Perceived Power Disadvantage (PPD)			.00	.07	.06	.07	.04	.07
	Perceived Task Interdependence (PTI)			.13	.08	.13	.08	.07	.07
3 Interaction	PPD * PTI					.20 *	.10	.12	.09
4 Mediation	Affective Commitment (AC)							.47 ***	.07
	AC * PTI							.13 *	.06
	$\Delta\chi 2$		.16		3.04		4.14 *		34.63 ***
n=262	* p< .05								
	*** p< .001								

Hypothesis 2a and 2b predicted an interaction effect of perceived power disadvantage and perceived task interdependence on job satisfaction. As can be seen in Table 3.3, after adding the control variable in Model 1, and the main effects of perceived power disadvantage and perceived task interdependence in Model 2, adding the interaction term significantly improved the model ($\Delta\chi^2$=4.14, df=1, p<.05). The interaction coefficient had the expected positive sign (b=.20, p<.05).

The interaction is plotted in Figure 3.3 and this figure shows that perceived power disadvantage was negatively, albeit weakly, related to job satisfaction at low levels of perceived task interdependence (simple slope: b= -.146, se=.098, p<.10). At high levels of perceived task interdependence the relationship between perceived power disadvantage and job satisfaction was positive and significant (simple slope: b=.256, se=.145, p<.05). These results support Hypothesis 2a and 2b.

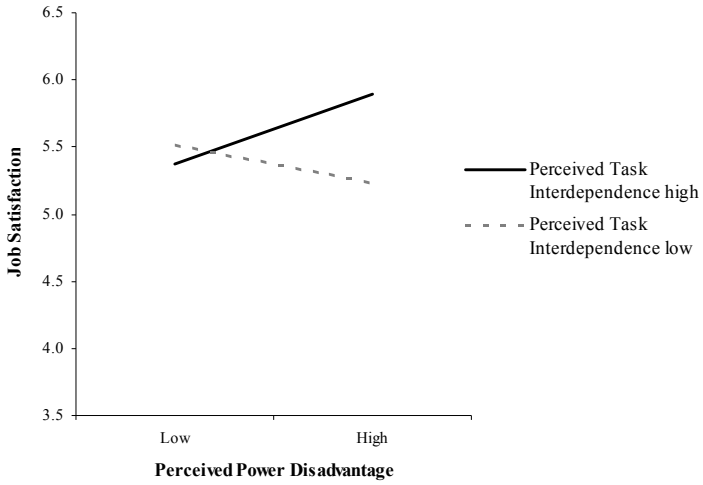

Figure 3.3: Perceived Power Disadvantage and Job Satisfaction at Different Amounts of Perceived Task Interdependence

The final step of our analyses tested the mediating effect of affective commitment. As can be seen in Table 3.3 (model 4), the interaction between perceived power disadvantage and perceived task interdependence dropped by 40% and became non-significant after adding the mediation terms to the model ($\Delta\chi^2$=34.63, df=2, p<.001). Furthermore, the coefficient for affective commitment was in the expected direction and highly significant (b=.47, p<.001) as was the moderated mediation term (b=.13, p<.05). Consequently, hypothesis 3 is fully support by our analyses.

DISCUSSION

Past research has indicated that task interdependence and affective reactions are positively related (e.g., Rasmussen & Jepperson, 2006). However, we argued that only inquiring about the level of task interdependence overlooks the possibility that differences in task dependence might exist that influence positive affective reactions (e.g., De Jong et al., 2007; Casciaro & Piskorski, 2005). By using theories regarding power, social exchange, and dependence (e.g., Emerson, 1962; Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003) we hypothesized that the power disadvantaged in a team would report negative affective reactions when they perceive low levels of task interdependence and positive affective reactions when they perceive high levels of task interdependence. These hypotheses received strong support in our multi-level analyses. Additionally, our results also provided support for our final hypothesis that affective commitment mediated the relationship between perceived power disadvantage, perceived task interdependence, and job satisfaction. The theoretical implication of these findings will be discussed below, after which we will address the strengths and weaknesses of the current research, followed by our suggestions for future research and the practical implications.

Theoretical implications

This study has at least three important implications for research on affective reactions, (inter)dependence, and power. First, as Table 3.2 shows, our results support the previously observed positive association between the level of task interdependence and affective commitment (e.g., Sprigg et al., 2000; Van der Vegt & Van de Vliert, 2000; Van der Vegt et al., 2001; Wageman, 2001). However, as was hypothesized, this main effect was overshadowed by an interaction between the differences in dependence (i.e. perceived power disadvantage) and the level of task interdependence. The subsequent theoretical implication is that the main effect of the level of task interdependence found in past research is especially strong for the power disadvantaged while it is non-existent for the powerful. This finding implies that future studies into (inter)dependence and affective reactions might benefit from not only drawing from social exchange theories (e.g., Anderson & Williams, 1996), but also from theories regarding power (e.g., Emerson, 1962). Our first contribution is therefore to the affective reactions literature, by introducing differences in task dependence, and the associated power theories, to this field.

Second, our results support and extend the scarce empirical evidence regarding asymmetry in task dependence by indicating that theories regarding

power and dependence are not only applicable for this issue at the relational level (e.g., De Jong et al., 2007; Rusbult & Van Lange, 2003) but can also be used at the individual level. Furthermore, our findings extent both these relational level studies as well as the recent organizational level study of Casciaro and Piskorski (2005) by demonstrating that the scarcely researched interaction between asymmetry in dependence and the level of inter-dependence is a significant predictor for the development of affective reactions at the relational level. Our study therefore fills the gap which existed between the recent organizational level studies and the relational level studies and as such contributes to theories regarding social exchange and interdependence by indicating that the level of interdependence and the asymmetry in dependence should be investigated as separate variables.

Third, in contrast to the suggestion of Emerson (1962: p. 40) that the powerful are more prone to exit the team, our result indicate that it could be the power disadvantaged whom are actually preparing to leave the team. As can be seen in Figure 3.2 and 3.3, power disadvantaged team members who perceive low levels of task interdependence report the lowest amount of positive affective reactions. This finding becomes very logical if it is realized that the power of the powerful is based on the social structure of the team and as such could loose some power if the power disadvantaged decide to quit. Hence, viewed with the association between affective reactions and turnover intentions in mind (e.g., Hellman, 1997; Van Knippenberg & Sleebos, 2006), our results indicate that the powerful are apparently not in a hurry to leave and the reason for this is that leaving entails the risk of loosing power. This line of reasoning also implies that power disadvantaged team members who perceive little opportunity to persuade the powerful to provide them with enough resources (i.e. who perceive a low level of task interdependence) have little to loose by leaving the team. By being less committed to the team and less satisfied with their job, the power disadvantaged might actually be putting pressure on the powerful not to push them too far, and signal to the powerful that their power is at risk if they decide to quite the team (cf. Ross, 1921; Waller & Hill, 1951). Consequently, our results contribute to theories regarding power (e.g Emerson, 1962) by indicating that it are the power disadvantaged, not the powerful, who are less committed to the team and less satisfied with their job and they might therefore be the ones who are preparing to leave the team.

As we will discuss further on, this delicate balancing act (cf. Emerson, 1962) between the powerful and the power disadvantaged might be a worthwhile topic for future research. But, first we will discuss some strengths and weaknesses of the current study.

Strengths and weaknesses

Naturally there are some strengths and weaknesses associated with our choices in theory, methodology, and sample which may warrant some caution in interpreting the results. A first weakness might be the use of self-report data, which could have introduced common source biases. Although we acknowledge that this is a potential weakness, it should be realized that in line with other studies (e.g., De Jong et al., 2007; Ferrin et al., 2006) our research question was based around the perceptions of individual team members and consequently we had to inquire about the self-perceptions of each individual. We tried to alleviate some of these concerns by using multiple methods for our measures (e.g., dyadic level measures and individual level measures). Moreover, the significant two-way interactions are difficult to attribute to common source bias. Nevertheless, the validity of our findings could be tested in future research by using data from different sources.

Another potential weakness of the present study might be the use of single-items for assessing the dyadic level differences in dependence (i.e. assessing power disadvantage). In line with prior research regarding social networks (e.g., Bowler & Brass, 2006), we decided to use single-item measures because the demands on the respondents were already quite high and we wanted to investigate all the work relationships within a team. However, this approach can also be viewed as a strong point of the current study since the use of dyadic level data to construct an individual level measure enabled us to really inquire about these relationships. Moreover, since our items were adopted from existing scales that have shown good reliability and validity in previous research (e.g., Van der Vegt et al., 2000; De Jong et al., 2007) and since we constructed individual level measures from multiple dyadic level items, we believe that our way of measuring power disadvantages is actually a strength of the present study and could be used in future studies.

A final weakness of the present study is the use of cross sectional data, which prevented us from fully testing the causality of our model. Although the results are inline with our theoretical development, the actual causality might be different than hypothesized. Future research could test the causality by employing more measurement moments or by conducting laboratory experiments.

Future research

Testing the causality is by no means the only option which future studies could take. For instance, it could also be worthwhile to investigate how the resource exchange process underlying our theoretical model exactly works. Based on the work of Emerson (1962) it can be expected that the power disadvantaged transfer status to the powerful in order to receive their help.

This transferal of status is argued to balance the relationship since the powerful make their resources available and the power disadvantaged are providing the powerful with appreciation in return (i.e. intangible resources). Based on our results it can be argued that this process is happening in work teams, since we found that power disadvantaged who are highly task interdependent report the most affective commitment to each other and their teams, while the powerful only report modest amounts of affective commitment. Consequently, it appears that both the powerful and the power disadvantaged are providing resources to their team, although the type of resources will likely be different. In our opinion disentangling these processes would be a very interesting research topic.

Another interesting avenue for future research might be to focus more on the outcomes of our model by distinguishing between different types of affective reactions (e.g., Allen & Meyers, 1990; Hackett, Bycio, & Hausdorf, 1994). If the above line of reasoning concerning the exchange of different types of resources is valid, it can also be expected that the powerful and the power disadvantaged are differently affected by these exchanges. Our results provide some support for this line of reasoning given our finding that it are the power disadvantaged who differ in their affective reactions, while the powerful are unaffected. However the reversed might be true if one would investigate other aspects of commitment, such as normative commitment (i.e. an employee's feeling of obligation to stay with the organization; Hackett et al., 1994: p. 15). For instance, some of the powerful might believe that responsibility comes with power and although such individuals can still be expected to report lower levels of affective commitment than the power disadvantaged, their normative commitment might be higher given their believes about "nobility obliges". As this example indicates our results imply that the framework of Casciaro and Piskorski (2005) and the associated theories regarding power and dependence (e.g., Emerson, 1962; Rusbult & Van Lange, 2003) might provide future research with a framework that can be used to tackle the remaining challenge of commitment research to demonstrate that the different components have differential relationships to other variables (cf. Hackett et al., 1994: p. 22).

As a final suggestion for future research we suggest to investigate in more depth how both concepts of task dependence influence affective reactions. As was mentioned in the introduction, task interdependence can increase the frequency of communication (e.g., Anderson & Williams, 1996) and increase the liking of each other (e.g., Bornstein, 1989). These processes were argued to increase the information processing of the powerful and diminish the abuse of power respectively and our results support this view. Future studies might investigate if these processes are operating at the same

time or if they are influenced by other variables. However, in our opinion it would be even more interesting to investigate a third possible mechanism of higher levels of task interdependence, namely the possibility that high task interdependence could enable coalition forming. Emerson (1962) already noted that dyadic power-dependence relationships might be influenced by the network of relationships within the team (e.g., two power disadvantaged team members form a partnership against a powerful team member). Although we went beyond dyadic relationships by using the average amount of perceived task interdependence as a measure, we were unable to really investigate the process of coalition forming. Given our encouraging results, future investigation could explicitly investigating triads or networks in order to investigate coalition forming.

Practical implications

There are at least two important practical implications to be drawn from the present study. First, our results clearly indicate that both the level of task interdependence as well as the differences in task dependence should be considered when trying to increase affective commitment and job satisfaction of the members of the team. Although our results support prior studies (e.g., Rasmussen & Jeppensen, 2006) in their conclusions that increasing the average level of task interdependence in the team would result in more positive affective reactions, our results also point out that only specific team members (i.e. the power disadvantaged) benefit from such an action. In light of this finding we would advice practitioners to pay attention to the possibility of power differences within the team, since interventions aimed at increasing affective reactions, such as raising the level of task interdependence, might only work within teams in which there are power disadvantaged.

Second, our results demonstrated that some of the power disadvantaged report the lowest levels of affective commitment and job satisfaction. Given the association between positive affective reactions and lower turnover intentions (e.g., Hellman, 1997; Van Knippenberg & Sleebos, 2006), it should be realized that the power disadvantaged might be the ones who are preparing to leave the team. As such we would advice to not focus mainly on the possibility that the powerful are leaving (cf. Emerson, 1962: p. 40), but to also consider the possibility that some of the power disadvantaged team members could be closer to quitting the team. If, for example, this power disadvantaged team member is a young graduate who has promise but who still has to learn the tricks of the trade, it would pay of in the long run to retain such an employee. Based on our results, we suggest that such employees might be retained by increasing their level of task interdependence within the team.